ABSTRACT

A prestressed tubular belt has variable prestressing forces located along its width to provide control over the shape of the belt, while at the same time providing the proper forces in order to maintain the integrity of the belt shape. Various methods and systems are utilized in the manufacturing of such a tubular belt. One such method involves stretching and affixing one portion of a belt layer to a non-stretched layer in a stepwise manner. Another system and appertaining method involves utilizing anchor strips affixed to a layer of the belt and then stretching the belt in a stepwise manner using ribs on a tool that mate with the anchor strips to hold the layer in varying degrees of tension prior to affixing a second layer to it. Other mechanisms for applying variable prestressing forces are also considered.